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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,802	09/30/2003	Melissa Ann Clark	030627/263750	2236
826	7590	03/14/2006	EXAMINER	
ALSTON & BIRD LLP BANK OF AMERICA PLAZA 101 SOUTH TRYON STREET, SUITE 4000 CHARLOTTE, NC 28280-4000			MAYES, DIONNE WALLS	
			ART UNIT	PAPER NUMBER
			1731	

DATE MAILED: 03/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/675,802

Applicant(s)

CLARK ET AL.

Examiner

Dionne Walls Mayes

Art Unit

1731

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 05 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 8-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 11-25 is/are rejected.
- 7) ☒ Claim(s) 9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 11-23, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Noznick et al (US. Pat No. 3,400,722) in view of Mentzel et al (US. Pat. No. 5,423,336).

Noznick et al discloses nearly all that is recited in the claims since it teaches a cigarette 2 with a tobacco rod 4 and a multi-sectional filter having a 1<sup>st</sup> filter section 6 – comprised of filter material containing a foamed, whipped, dried, finely divided porous emulsified fat substance that enhances the particulate filtration efficiency of the entire filter (corresponding to the claimed “first...section of filter material”); a 2<sup>nd</sup> filter section 14 of paper fibers (corresponding to the claimed “second...section of filter material”); and a compartment between the two filter sections containing activated carbon 12. (see entire document). It follows that the 1<sup>st</sup> filter section would have a greater particulate removal efficiency than the 2<sup>nd</sup> filter section since the foamed whipped substance that is responsible for the enhanced particulate removal of the entire filter is contained in said 1<sup>st</sup> filter section. Also, while Noznick et al may not specifically disclose a plurality of ventilation holes for introducing air into the filter element located between the end of the filter element proximal to the tobacco rod and the mid-point of the adsorbent-containing

Art Unit: 1731

portion of the compartment - which provides the claimed volumetric air dilution of mainstream smoke - this would have been an obvious modification to the filter of Noznick since placement of ventilation holes at this location is known – as evidenced by the Mentzel et al reference (see element 5 in Figures).

Regarding claim 4, it would have been obvious to one having ordinary skill in the art at the time of the invention to have decided to fabricate each of the 1<sup>st</sup> and 2<sup>nd</sup> filter sections using plasticized cellulose acetate tow since such material is conventionally used as filter material in the tobacco art.

Regarding claims 11-16, it would have been obvious to one having ordinary skill in the art at the time of the invention to have arrived at the claimed filter section length parameters after routine experimentation to arrive at an optimal length.

3. Claims 1-3, 8, 11-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Xue et al (US. Pat. No. 6,584,979) in view of Squires et al (US. Pat. App. Pub. 2005/0139223) and Mentzel et al (US. Pat. No. 5,423,336).

Xue et al discloses nearly all that is recited in the claims since it teaches a cigarette 10 with a tobacco rod 18 and a multi-sectional filter having a 1<sup>st</sup> filter section 16 comprised of filter fiber material (corresponding to the claimed “first...section of filter material”); a 2<sup>nd</sup> filter section 12 comprised of filter fiber material (corresponding to the claimed “second...section of filter material”); and a compartment between the two filter sections containing particulate adsorbent material 23, such as activated carbon. Xue et al states that the 1<sup>st</sup> filter section can be made of cellulose acetate or any other suitable material, and such can be the same material or different material from the 2<sup>nd</sup> filter

Art Unit: 1731

section (see entire document). While Xue et al may not specifically state that the 1<sup>st</sup> filter section has a greater particulate removal efficiency than the 2<sup>nd</sup> filter section, Squires et al discloses that paper filters are known to be generally more efficient at removing tar (i.e. a particulate) from tobacco smoke than are tow filters. Further, Squires et al also discloses that “triple” filters which have a paper filter section, a tow filter section and a gap/activated carbon section therebetween are known in the tobacco art (see paragraph 0004). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to have provided the filter configuration of Xue et al, with a paper filter-space-tow filter configuration, since such an arrangement is known in the tobacco art – as evidenced by the Squires et al reference. One having ordinary skill in the art would have arrived at an arrangement wherein the paper filter is the 1<sup>st</sup> filter section and the tow filter is the 2<sup>nd</sup> filter section since such an arrangement is envisioned by Xue et al since it stated that the filter sections could be made of different, but suitable, filter material. Since the 1<sup>st</sup> filter section is made of paper filter and the 2<sup>nd</sup> filter section is made of tow, it follows, pursuant to the teaching of Squires et al, that the 1<sup>st</sup> filter section would have a greater particulate removal efficiency. Because of this, it would also follow that the filament weight per unit length would be less, in the 1<sup>st</sup> filter section, than that in the 2<sup>nd</sup> filter section. While Xue et al, modified by Squires et al, may not specifically disclose a plurality of ventilation holes for introducing air into the filter element located between the end of the filter element proximal to the tobacco rod and the mid-point of the adsorbent-containing portion of the compartment - which provides the claimed volumetric air dilution of mainstream smoke -

Art Unit: 1731

this would have been an obvious modification to the filter of Xue et al/Squires et al since placement of ventilation holes at this location is known – as evidenced by the Mentzel et al reference (see element 5 in Figures).

Regarding claims 11-16, it would have been obvious to one having ordinary skill in the art at the time of the invention to have arrived at the claimed filter section length parameters after routine experimentation to arrive at an optimal length.

#### ***Allowable Subject Matter***

4. Claims 9-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

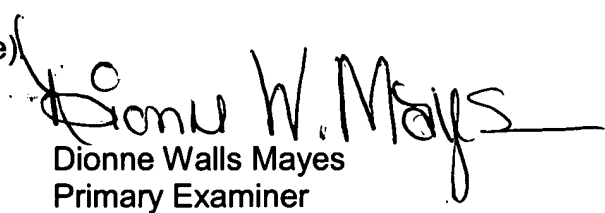
#### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dionne Walls Mayes whose telephone number is (571) 272-1195. The examiner can normally be reached on Mon-Fri, 7AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven P. Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1731

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Dionne Walls Mayes  
Primary Examiner  
Art Unit 1731

March 10, 2006